

**AMENDMENTS TO THE CLAIMS:**

The following listing of claims supersedes all prior versions and listings of claims in this application:

1. (Currently Amended) An image processing method for detecting objects within an input image, the image being composed of picture elements, the method comprising:

a) segmenting picture elements representing a foreground object within the input image from those picture elements forming the image background using a first segmentation technique, wherein the picture elements segmented as foreground include elements representing a shadow or highlight of the object;

b) storing a segmentation mask, containing the location of the segmented picture elements representing a foreground object, in a data store;

c) segmenting picture elements which have the characteristics of a shadow or highlight of an object from those picture elements representing the foreground object using at least one other segmentation technique adapted to detect shadows or highlights;

[[c)] d) segmenting as foreground surrounding picture elements to those picture elements which are already segmented as foreground by performing a morphological dilution operation;

e) comparing the surrounding picture element segmented as foreground in step d) against the stored segmentation mask;

[[d)]] f) repeating steps d) and e) if comparison determines that the segmented surrounding picture elements do not touch the boundary of the foreground object in the stored segmentation mask; and

g) if the comparison determines that the segmented surrounding picture elements touch the boundary of the foreground object in the stored segmentation mask, then c) until picture elements which were not segmented as foreground after step a) would be or are segmented as foreground; and then e) detecting as objects groups of adjacent picture elements which have been segmented as foreground.

2. (Previously Presented) An image processing method as claimed in claim 1, wherein the segmenting step a) further comprises:

for each picture element of the input image which is to be segmented as foreground, validating the foreground segmentation by comparison of the picture element with probability models relating to surrounding picture elements, wherein the foreground segmentation is confirmed if at least half of the models indicate that the picture element is foreground.

3. (Previously Presented) A computer-readable storage medium containing a computer program or suite of computer programs arranged such that, when executed by a computer, they control the computer to perform the method of claim 1.

4. (Cancelled)

5. (Currently Amended) An image processing system for detecting objects within an input image, the image being composed of picture elements, the system comprising:

a data store;

an image processing means processor arranged to receive an input image to be processed, and to apply the following image processing operations thereto:

a) to segment picture elements representing a foreground or moving object within the input image from those picture elements forming the image background using a first segmentation technique adapted to detect differences in the input image from a general background image, wherein the picture elements segmented as foreground include elements representing a shadow or highlight of the object;

b) to store a segmentation mask, containing the location of the segmented picture elements representing a foreground object in the data store;

c) to segment picture elements which have the characteristics of a shadow or highlight of an object from those picture elements representing the foreground object using at least one other segmentation technique adapted to detect shadows or highlights;

~~[[c)]]~~ d) to repeatedly segment as foreground surrounding picture elements to those picture elements already segmented as foreground using a morphological dilution operation ~~until picture elements which were not segmented as foreground after step a), if any, are segmented as foreground;~~

e) to compare the surrounding picture elements segmented as foreground in step c) against the stored segmentation mask;

f) to stop the morphological dilution operation if the comparison determines that segmented surrounding picture elements touch the boundary of the foreground object in the stored segmentation mask; and then

~~[[e)]]~~ g) to detect as objects groups of adjacent picture elements which have been segmented as foreground.

6. (Previously Presented) An image processing system as claimed in claim 5, wherein the image processing means is further arranged, for each picture element of the input image which is to be segmented as foreground as a consequence of the segmentation a), to validate the foreground segmentation by comparison of the picture

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element with probability models relating to surrounding picture elements, wherein the foreground segmentation is confirmed if at least half of the models indicate that the picture element is foreground.